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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,222	05/16/2006	David James Howell	4502-1075	5283
466 7590 09/06/2007 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER BAISA, JOSELITO SASIS	
			ART UNIT 2832	PAPER NUMBER
			MAIL DATE 09/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/540,222

**Applicant(s)**

HOWELL ET AL.

**Examiner**

Joselito Baisa

**Art Unit**

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/24/2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the resulting flux associated with each bobbin which is circumferential and axially aligned with an adjacent bobbin must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Shteynberg [691644].

Regarding claim 8, Shteynberg discloses a set of wound bobbins 15 initially wound as a rectilinear axially aligned array of adjacent bobbins and formed into a circular array, the windings of two or more bobbins in each phase being formed from a continuous wire or a continuous set of parallel wires [Col. 3, Lines 22-32] and [ see Figure 3].

With respect to claims 1 and 2, the claims are method counterpart of structure of claim 8 and method steps therefore are inherent for manufacturing a toroidally wound electrodynamic machine.

Regarding claim 10, Shteynberg discloses the bobbins 15 are tapered on the inner cheeks to facilitate forming into a circular array [see Figure 5].

Regarding claim 11, Shteynberg discloses an electrodynamic machine when fitted with a winding described above [Col. 3, Lines 23-32].

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 and ~~9-11~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteynberg et al. [6941644] in view of Tanaka et al.[4639707].

Regarding claim 9, Shteynberg discloses the instant claimed invention discussed above except for the winding method and the bobbins provide free space between bobbins sufficient to allow forming them into a circular array while still providing contact between the bobbins on the side of the bobbin.

Tanaka discloses the winding method and the bobbins (20C, 20D, 22) provide free space between the bobbins sufficient to allow forming them into a circular array while still providing contact between the bobbins on the side of the bobbin 21 [Col. 3, Lines 18-35, Figure 1].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the winding method and bobbin arrangement as taught by Tanaka to the structure of Shteynberg .

The motivation would have been to have a toroidal inductor with bobbins arranged in peripheral direction forming high voltage winding [Col. 1, Lines 13-20].

With respect to claims 3-7, the claims are method counterpart of structure of claims 9-11 and method steps therefore are inherent for manufacturing a toroidally wound electrodynamic machine.

Tanaka further discloses a toroidal core 1 passing through an aperture in each bobbins (20C, 20D, 22) that interfit to positively locate with each other as seen in figure 1. Tanaka also discloses pathways 23 between bobbins to support the wires [Col. 3, Lines 32-35, Figure 1].

With respect to claims 12-20, the claims are method counterpart of structure of claims 8-11 and method steps therefore are inherent for manufacturing a toroidally wound electrodynamic machine.

Tanaka discloses a resulting flux associated with each bobbin is circumferential and axially aligned with an adjacent bobbin (see Figure 1). Tanaka further discloses bobbins (20C, 20D, 22) has external shelf 23 routed between the bobbins to support the wires and each bobbin has cavity 22 and has an extension 23 to fit into the cavity 22 of the adjacent bobbin [Col. 3, Lines 32-36, Figure 1].

### ***Response to Argument***

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Shteynberg discloses a set of wound bobbins initially wound as a rectilinear axially aligned array of adjacent bobbins and formed into a circular array, the windings of two or more bobbins in each phase being formed from a continuous wire or a continuous set of parallel wires.

Tanaka discloses a resulting flux associated with each bobbin is circumferential and axially aligned with an adjacent bobbin (see Figure 1).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joselito Baisa  
Examiner  
Art Unit 2832

jsb

  
ELVIN ENAD  
SUPERVISORY PATENT EXAMINER  
3/24/07